

(12) UK Patent Application (19) GB (11) 2 108 382

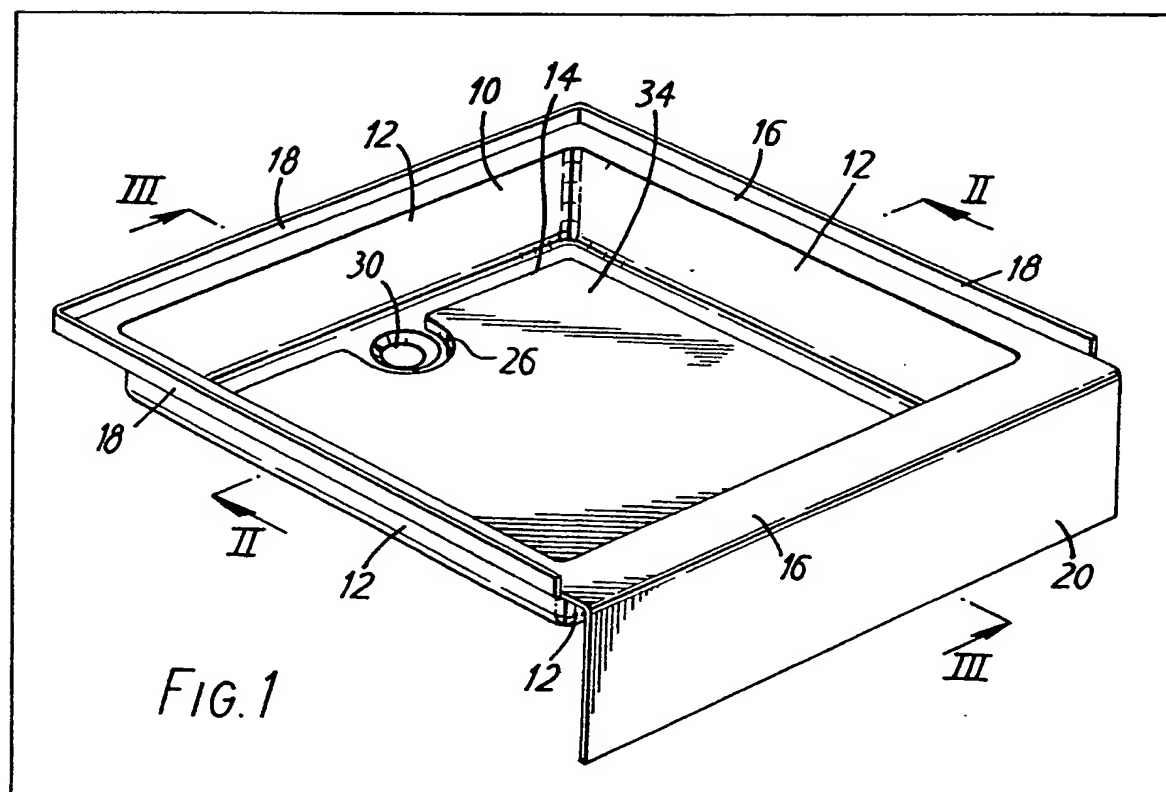
A

(21) Application No 8231579
(22) Date of filing 4 Nov 1982
(30) Priority data
(31) 8133266
8135690
(32) 4 Nov 1981
26 Nov 1981
(33) United Kingdom (GB)
(43) Application published
18 May 1983
(51) INT CL³
A47K 3/22
(52) Domestic classification
A4N 2B
(56) Documents cited
GB 1602191
GB 1337193
GB 1202431
GB 0638720
US 4028751
US 3895398
US 3606617
(58) Field of search
A4N

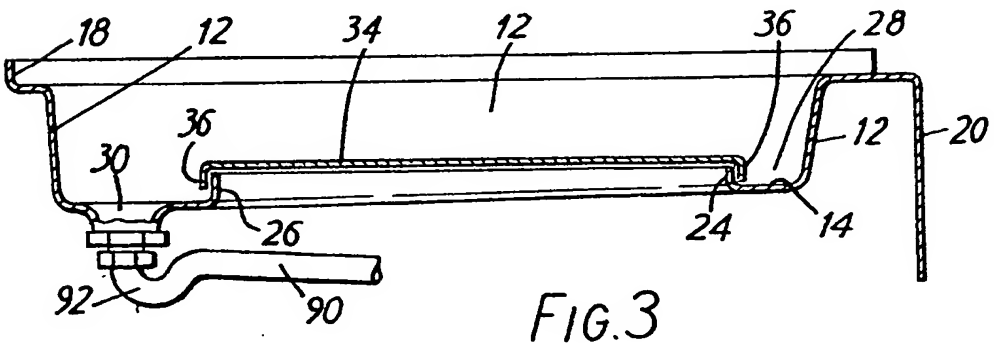
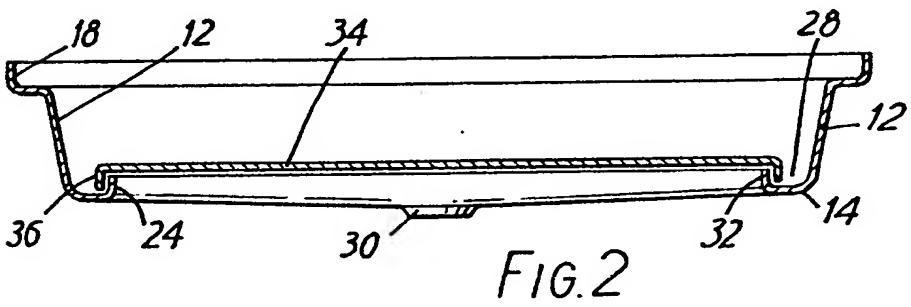
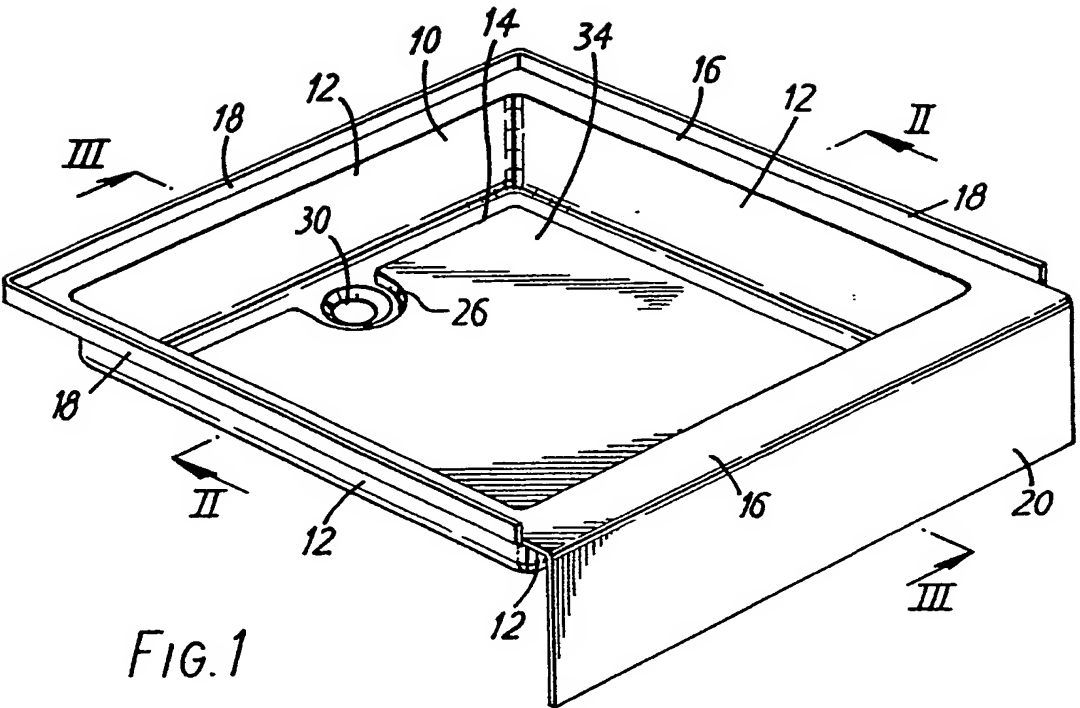
(71) Applicants
John Christopher King,
White Lion House,
Furneux Pelham,
Buntingford,
Hertfordshire
(72) Inventor
John Christopher King
(74) Agents
Mathys and Squire,
10 Fleet Street,
London EC4Y 1AY

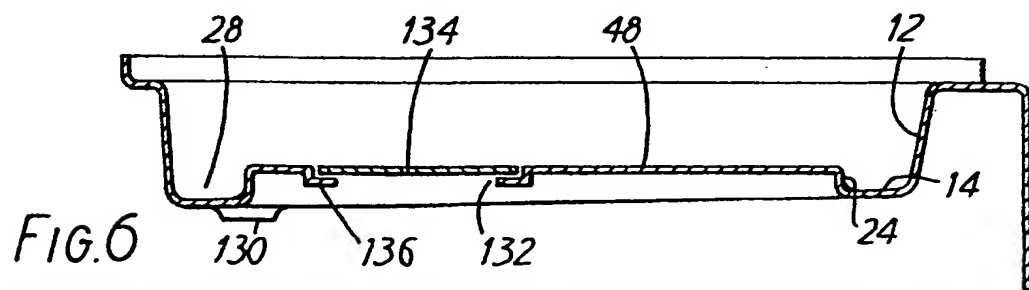
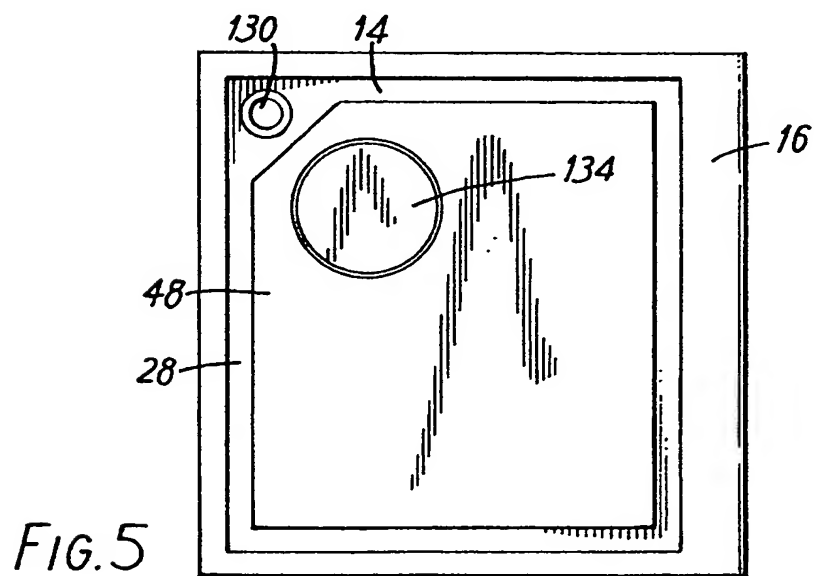
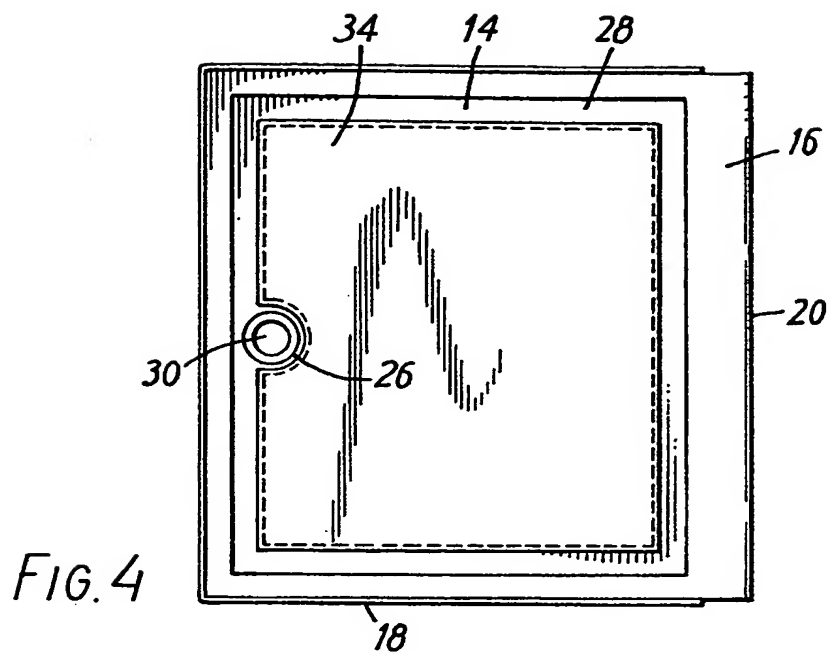
(54) Shower tray

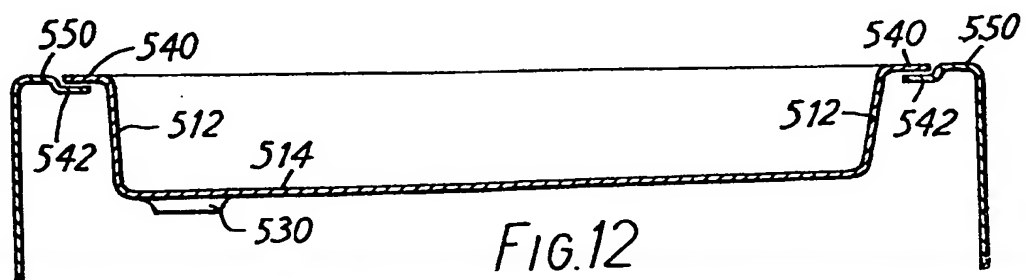
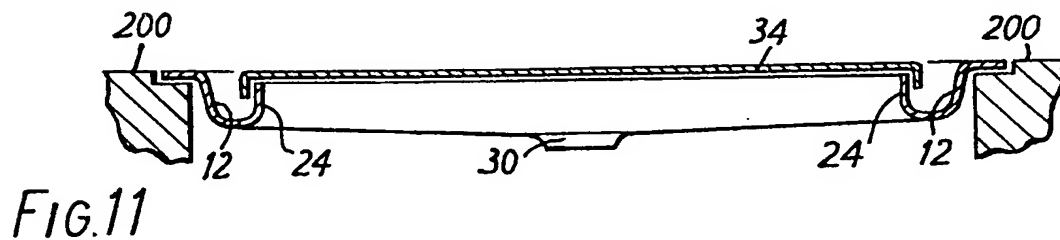
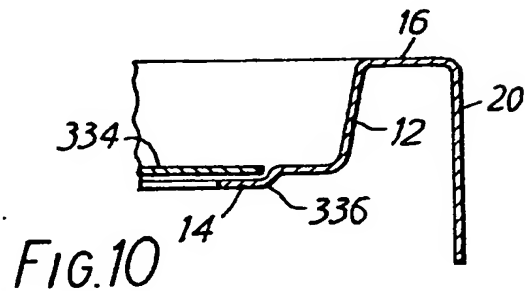
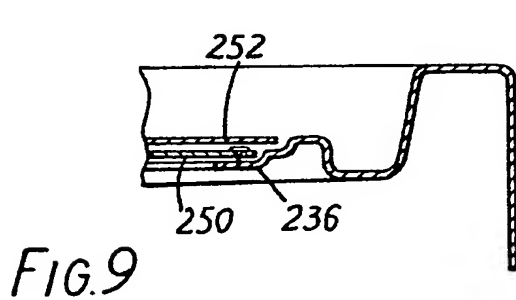
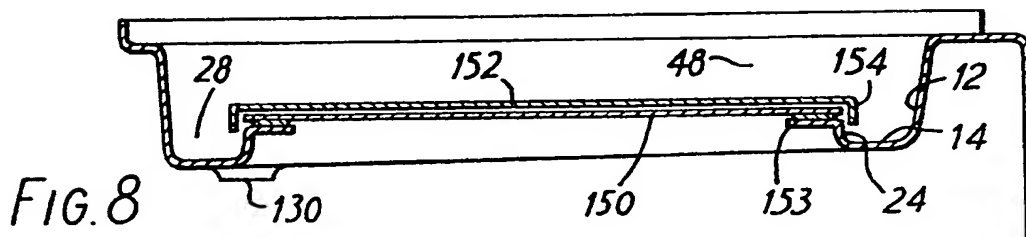
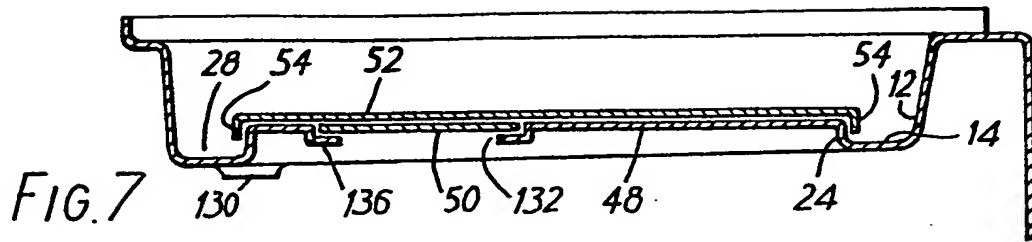
(57) A shower tray has panel means 34, including at least part of the bottom wall of the tray, the panel means being removable to allow access to the waste pipe connected to the drainage hole 30 of the tray. The panel means preferably comprises a removable panel closing an aperture in the bottom wall adjacent the drainage hole. There may be a single removable panel, or the panel means may comprise a lower structural panel and an upper decorative panel which conceals the lower panel and any fixing devices holding the lower panel in position. The aperture may be only of sufficient area to allow adequate access, or may take up almost the whole area of the bottom wall. The bottom wall of the shower tray may be formed with a peripheral gutter to receive water drainage from the panel means.



GB 2 108 382 A







SPECIFICATION

Shower tray

5 This invention relates to shower trays.

Shower trays usually consist of a shallow tray, of plastics or other suitable material, having a drainage hole in the bottom wall of the tray. When the shower tray is installed in a shower enclosure, it is supported 10 a short distance above the floor on a suitable framework, and a waste pipe with a suitable trap is connected to the drainage hole. It is necessary to allow access to the waste pipe, for example to deal with a blockage or leakage from the pipe. This is 15 often achieved by providing a removable vertical panel at one side of the tray. This however has the disadvantage that access is restricted because of the limited area of the access opening and the fact that the bottom wall of the tray is usually only a short distance, typically less than 10 cm, above the floor. Because of the restricted access, it is usually necessary to position the run of the waste pipe near to the access panel. A further disadvantage is that the removable access panel is often unsightly.

25 This invention consists in a shower tray comprising side walls extending upwards from a bottom wall having a drainage hole, in which there are provided panel means including at least part of the bottom wall, the panel means being removable to allow 30 access to a waste pipe connected in use to the drainage hole.

Preferably, the bottom wall has an aperture adjacent the drainage hole, and the panel means comprises a removable panel which closes the aperture.

35 The aperture may be of substantial area, for example taking up most of the area of the bottom wall except for the area surrounding the drainage hole. Alternatively, the aperture may be only of sufficient area to give sufficient access to the fittings 40 connected to the drainage hole.

The removable panel may rest on an inwardly directed flange extending around the aperture, the flange being shaped to provide a recess to receive the removable panel so that the upper face of the 45 panel is level with the upper face of the bottom wall. A seal may be interposed between the panel and the bottom wall, and fixing means may be provided for releasably holding the panel in place.

In one form of the invention, the panel means 50 includes a second removable panel fitting over the first panel so as to conceal the first panel and any fixing means. The first panel, together with the remainder of the bottom wall, provides a rigid base, whilst the second panel can be arranged to give a 55 pleasing appearance to the shower tray.

The bottom wall may be shaped to provide a gutter extending alongside the side walls so that water can drain from the gutter to the drainage hole, and in which the periphery of the second panel 60 projects over the gutter so that water drains from the second panel into the gutter.

In another form of the invention the aperture is

surrounded by an upstanding lip, the lip and the side walls defining between them a gutter from which 65 water can drain to the drainage hole, and a single removable panel projects over the upstanding lip so that water can drain from the panel into the gutter.

The invention will now be described, by way of example, with reference to the accompanying drawings, in which:

70 Figure 1 is a perspective view of a shower tray in accordance with the invention,

Figure 2 is a cross-section on line II-II of Figure 1,

Figure 3 is a cross-section on line III-III of Figure 1,

75 Figure 4 is a plan view, to a smaller scale, of the shower tray,

Figure 5 is a plan view of a shower tray forming a second embodiment of the invention,

Figure 6 is a section on line VI-VI of Figure 5, and

80 Figures 7 to 12 are cross-sections through other embodiments of shower tray in accordance with the invention.

Referring to Figures 1 to 4, a shower tray has four side walls 12 and a bottom wall 14. A flat web 16 85 extends outwards from the upper edges of the side walls. On three sides the web 16 terminates in an upstanding flange 18, and on the fourth side in a downwardly depending skirt 20. The shower tray is designed for use with a shower enclosure fitted in a 90 recess, with the skirt 20 facing outwards from the recess. A drainage hole 30 is formed in the bottom wall 14 close to the side wall remote from the skirt 20.

The bottom wall 14 is formed with an aperture 22 95 bounded by an upturned lip 24. The lip 24 extends quite close to the side walls 12 throughout its length, except for an inwardly curved portion 26 around the drainage hole 30. The lip 24 thus defines, with the side walls 12, a gutter 28 in which water can drain to the drainage hole 30. The bottom wall 14 is shaped 100 so that the drainage hole 30 is at the lowest point, to ensure good drainage. The lip 24 is arranged so that its upper edge 32 lies in a horizontal plane.

A removable panel 34 has a shape corresponding 105 to that of the aperture 22 but of somewhat larger size, so that the panel 34 projects over the lip 24. A depending flange 36 extending around the periphery of the panel 34 fits over the lip 24 to hold the panel in position and ensure that water draining off the panel 110 runs into the gutter 28.

In use, the shower tray is installed using well-known techniques, the tray being fixed to a suitable supporting frame and the flanges 18 being fixed to the walls of the recess in which the tray is installed.

115 A waste pipe 90 (Figure 3) is connected to the drainage hole 30 through a trap 92.

The removable panel 34 is then placed over the aperture 22. The panel rests on the lip 24 and is held in position by the flange 36. The panel provides a flat 120 horizontal surface on which the user of the shower can stand. Water draining from the panel flows into the gutter 28 and so to the drainage hole 30. If the lip 24 is of sufficient height, there will be little danger of leakage of water between the lip 24 and the flange 28

of panel 34. However, this risk could be eliminated by providing a seal between the panel and the lip 24, for example in the form of an O-ring fixed around the top of the lip.

5 The panel 34 can be easily lifted to allow access to the waste pipe 90 and tap 92. Maintenance of the plumbing fittings, as well as installation of the shower tray, is therefore facilitated.

10 In a modification of the shower tray shown in Figures 1 to 4, the panel 34 is held in position by suitable fitting means, for example by self-tapping screws passing through the flange 36 of the panel 34 and engaging the lip 24 of the tray.

15 The shower tray and removable panel may be made of any suitable material, for example plastics such as acrylic or polystyrene, glass fibre reinforced plastics, or pressed steel. The panel and the remainder of the tray could be made of different materials. If necessary, the panel could be strengthened, for example by ribs formed on the underside of the panel.

25 Figures 5 and 6 illustrate an embodiment of the invention in which the removable panel forms only part of the bottom wall, the area of the aperture in the bottom wall needing to be only large enough to allow adequate access to the plumbing fittings. The shower tray has side walls 12 extending from a bottom wall 14 and the bottom wall 14 has an upturned lip 24 defining a gutter 28, in a similar manner to the embodiment of Figures 1 to 4. However, a portion 48 of the bottom wall 14 extends inwardly from the upper edge of the lip 24 to provide the platform on which the user of the shower tray stands. A circular aperture 132 is formed in the portion 48 in a location adjacent the drainage hole 130, which is positioned in the gutter 28. The size and position of the aperture 132 are such as to allow adequate access to the plumbing fittings connected in use to the drainage hole 130. As shown, the aperture 132 is circular, but it could be made in any other suitable shape.

40 Extending round the periphery of aperture 132 is a flange 136 shaped to provide a recess to receive a removable panel 134, so that the upper face of the panel is flush with the upper face of the bottom wall portion 48. The panel 134 is removable, to allow access to the plumbing fittings when the shower tray is installed. A seal, for example of rubber or plastics, may be provided between the panel 134 and the flange 136.

50 In a modification of the embodiment shown in Figures 5 and 6, the panel 134 is held releasably secured to the flange 136, for example by means of screws.

55 The embodiment of Figures 5 and 6 could be modified by increasing the area of the aperture 132. The area could be any value between the minimum required to give adequate access to the plumbing fittings and a maximum in which the aperture took up most of the area of the bottom wall portion 48. In the latter case, the panel 34 would provide the area on which the user stands, in a similar manner to the embodiment of Figures 1 to 4.

65 Figure 7 shows an embodiment in which there is provided, instead of a single removable panel, a

lower base panel and an upper decorative panel. The shower tray of Figure 7 is generally similar to that of Figures 5 and 6, having an aperture 132 in the bottom wall portion 48. The aperture is closed by a removable panel 50, which may be secured to the wall portion 48, e.g. by screws. An upper panel 52 is of similar shape to the bottom wall portion 48 but of slightly greater area so that it projects over the edges of the portion 48. A downturned flange 54 extending round the periphery of the panel 52 holds the panel in place and ensures water draining from the panel 50 flows into the gutter 128. A seal may be provided between the upper panel 52 and the wall portion 48, as an alternative to or in addition to a seal between the lower panel 50 and the wall portion.

70 The upper panel 52 conceals the lower panel 50 and any fixing means used with the lower panel, and provides a visually attractive finish to the shower tray. The lower panel 50 enhances the rigidity of the structure and provides support for the upper panel 52. This is particularly important if the aperture 132 and lower panel 50 are given a relatively large area.

75 Figure 8 shows a modification in which the aperture 232 occupies most of the area of the bottom wall. The aperture 232 is surrounded by a flange 148 extending inwards from the upper edge of the lip 24. A base panel 150 rests on the flange 148, being held in place by means of screws. A rubber or plastics gasket 153 is fixed to flange 148 to provide a seal between the base panel 150 and the flange. An upper decorative panel 152, similar to the upper panel 52 of the embodiment of Figure 7, rests on the base panel 150 and has a downwardly extending flange 154 fitting over the edge of the panel 150. The upper panel 152 may be held in place by means of double-sided adhesive pads between the two panels.

80 Figure 9 shows an embodiment in which both the base panel 250 and the upper decorative panel 252 are received in a rebated flange 236 formed in a bottom wall portion 248 extending inwards from the lip 24, so that the upper face of the decorative panel 252 is flush with the bottom wall portion 248. The upper panel 252 is somewhat larger than the base panel 250 so that its periphery extends beyond the edges of the base panel. Alternatively, the two panels could be of the same size. The lower panel 250 may be relatively fixed to the flange 236. A seal may be provided between the base panel 250 and the flange 236, or between the two panels 250 and 252, or both.

85 In the embodiments of Figures 7 to 9, the upper decorative panel may be provided with a non-slip surface.

90 It will be appreciated that in the embodiments of Figures 5 and 6 and of Figures 9 and 10, the upstanding lip 24 defining the gutter 28 could be omitted, so that the removable panel, or the upper decorative panel, is level with the lower wall 14 of the shower tray. For example, Figure 10 shows an embodiment in which a one-piece removable panel 334 fits in a rebate 336 formed in the bottom wall 14 surrounding the aperture 332. As in the embodiment of Figures 5 and 6, the removable panel 334 could be made of any suitable size and shape.

Figure 11 illustrates a shower tray which is generally similar to that of Figures 1 to 4, except that the height of the side walls 12 is reduced to approximately the same as that of the lip 24 of bottom wall 14, so that the upper surface of the removable panel 34 is level with the upper edges of the side walls. This tray can be inset into a floor, for example with a tiled area 200 surrounding the tray at the same level as the removable panel 34.

In another form of the invention, instead of providing a removable panel covering an aperture in the bottom wall of the shower tray, the entire bottom wall together with part or all the side walls of the tray are made removable. For example, Figure 12 illustrates a shower tray having a bottom wall 514 with a drainage opening 530 and side walls 512 extending upwards from the bottom wall. An outwardly extending flange 540 extends around the upper rim of the side walls 512, and engages an inwardly extending flange 542 formed on the body 550 of the shower tray. In use, the body 550 of the tray is fixed in position in the desired location, and the remainder of the tray is releasably held in position by suitable fixing means, such as screws engaging the flanges 540 and 542. In this embodiment, since the drainage hole 530 is formed in the removable part of the tray, it is necessary for the waste pipe to be connected to the drainage hole by a fixing which can be released from above.

It will be appreciated that the invention can be applied to shower trays of various shapes, for example to trays having a skirt extending along two or more sides of the tray. It will also be appreciated that modifications could be made in the described embodiments. For example, where the removable panel is held by releasable fixing means, the fixing means could take various forms, such as clips, instead of screws. Where a seal is provided between the panel and the tray, the seal could take various forms, such as rubber or plastics gaskets, or coating one or both surfaces with a sealing composition, in liquid, jelly or paste form, of the kind which is non-hardenable and which can be released simply by applying force to the panel. Alternatively, surfaces of the panel and tray could be made closely fitting so that no additional sealing means is required between the panel and the flange.

CLAIMS

1. A shower tray comprising side walls extending upwards from a bottom wall having a drainage hole, in which there are provided panel means including at least part of the bottom wall, the panel means being removable to allow access to a waste pipe connected in use to the drainage hole.

2. A shower tray as claimed in claim 1, in which the bottom wall has an aperture adjacent the drainage hole, and the panel means comprises a removable panel which closes the aperture.

3. A shower tray as claimed in claim 2, in which the removable panel rests on an inwardly directed flange extending around the aperture, the flange being shaped to provide a recess to receive the removable panel so that the upper face of the panel is level with the upper face of the bottom wall.

4. A shower tray as claimed in claim 2 or claim 3,

in which a seal is interposed between the removable panel and the bottom wall.

5. A shower tray as claimed in any one of claims 2 to 4, in which there are provided fixing means for releasably holding the removable panel in place.

6. A shower tray as claimed in any one of claims 2 to 5, in which the panel means includes a second removable panel fitting over the first panel so as to conceal the first panel.

7. A shower tray as claimed in claim 6, in which the bottom wall is shaped to provide a gutter extending alongside the side walls so that water can drain from the second panel into the gutter.

8. A shower tray as claimed in claim 2, in which the aperture is surrounded by an upstanding lip, the lip and the side walls defining between them a gutter from which water can drain to the drainage hole, and the removable panel projects over the upstanding lip so that water can drain from the panel into the gutter.

9. A shower tray as claimed in claim 8, in which the removable panel has a depending flange extending around its periphery, the flange fitting over the lip of the bottom wall to retain the panel in position.

Printed for Her Majesty's Stationery Office by The Tweeddale Press Ltd., Berwick-upon-Tweed, 1983.
Published at the Patent Office, 25 Southampton Buildings, London, WC2A 1AY, from which copies may be obtained.